60 locates generally into the horizontal channel 56 on the posterior projection 50 of the tibial tray 22. Next, the surgeon can generally rotate the tibial insert 18 anteriorly to the position illustrated in FIG. 7. Next, the surgeon can advance the locking bar 20 into the horizontal groove 110 of the tibial insert 18 as well as the horizontal posterior grooves 42 formed on the first and second posts 34 and 36. The locking bar 20 can be further advanced until the lobe 150 generally wraps around the post 34 as illustrated in FIG. 1. It will be appreciated that while the locking bar 20 is shown with the lobe 150 wrapped around the post 34, the locking bar 20 may alternatively be inserted from the other direction when the lobe 150 wraps around the post 36. Notably, at this time, the inferior ledge 104 of the tibial insert 18 is confined between the locking bar 20 and the superior surface 48 of the tibial tray 22 precluding substantial lift-off of the tibial insert 18 from the tibial tray 22. The tibial insert 18 however, is permitted to rotate around an axis 160 (FIG. 3) to a predetermined angle of rotation 162 (counter-clockwise, as viewed in FIG. 4, or alternatively clockwise, not specifically shown). Explained further, the tibial insert body 68 includes a first bearing rotation stop surface 170 and a second bearing rotation stop surface 172 formed at a generally posterior most end of the horizontal groove 110. The stop surfaces 170 and 172 can define an angle less than 180 degrees relative to each other.

The tibial insert 18 is free to rotate around the axis 160 until either the first bearing rotation stop surface 170 or the second bearing rotation stop surface 172 engages the posteriorly facing surface 142 of the locking bar 20. Other configurations are contemplated. For example, various tibial insert bodies 68 can be provided that have unique stop surfaces 170 and 172 that define various angles. Additionally or alternatively, various locking bars 20 can be provided that have posteriorly facing surfaces 142 that attain various opposing geometries relative to the stop surfaces 170 and 172. For example, some posterior facing surfaces 142 may have an angle less than 180 degrees. In this regard, a surgeon may intraoperatively select a tibial insert body 68 and/or a locking bar 20 that cooperate to provide a desired fixed amount of rotation of the insert 18 relative to the tibial component 16. The insert 18 therefore can be selectively indexable to a plurality of fixed (or mobile) positions or orientations relative to the tibial component 16. Again, it will be appreciated that the tibial insert 18 is inhibited from lift-off from the tibial tray 22 as the main body 130 of the locking bar 20 precludes superior advancement of the tibial insert 18 by blocking the inferior ledge 104 from superior advancement. Concurrently, the horizontal flange 60 of the tibial insert 18 can also be restricted from lift-off by the overhang 58 provided on the posterior projection 50 of the tibial tray 22. Those skilled in the art will appreciate that other configurations are contemplated where use of a locking bar 20 is not necessary. In this regard, structure on the first and second retaining members 32 and 94 may cooperate to restrict the tibial insert 18 from lift-off while permitting a predetermined amount of rotation around the axis 160.

Turning now to FIGS. 8 and 9, a tibial prosthesis assembly 210 constructed in accordance to additional features of the present teachings will be described. The tibial prosthesis assembly 210 can generally include a tibial component 216 and a tibial insert 218. The tibial prosthesis assembly 210 can optimally include a set screw 220. The tibial component 216 can generally include a platform-like tibial tray 222 having an inferior bone engaging surface 224 and a superior bearing engaging surface 226. A stem 230 can generally extend inferiorly from the tray 222. The tibial component 216 includes a first retaining or interlock feature 234 that is configured to rotatably lock with a second retaining or interlock feature 236 formed on the tibial insert 218. In the example shown, the first interlock feature 234 is in the form of female splines 240 that rotatably mesh with cooperatively formed male splines 242 formed on the second interlock feature 236 of the tibial insert 218. As can be appreciated, during assembly, a surgeon may index the second interlock feature 236 to a desired rotational orientation relative to the first interlock feature 234 and then advance the male splines 242 inferiorly into meshing engagement with the female splines 240 of the first interlock feature 234. Then, a surgeon may advance the set screw 220 through a passage 250 defined through the tibial tray 222. The set screw 220 can engage the male splines 242 and inhibit the second interlock feature 236 from lifting out of the first interlock feature 234.

The foregoing description of the embodiments has been provided for purposes of illustration and description. It is not intended to be exhaustive or to limit the disclosure. Individual elements or features of a particular embodiment are generally not limited to that particular embodiment, but, where applicable, are interchangeable and can be used in a selected embodiment, even if not specifically shown or described. The same may also be varied in many ways. Such variations are not to be regarded as a departure from the disclosure, and all such modifications are intended to be included within the scope of the disclosure.

What is claimed is:

1. A tibial prosthesis assembly comprising:

a tibial component including an inferior bone engaging surface, a superior surface, a side surface joining the inferior bone engaging surface and the superior surface to define a perimeter, a first stem extending from the inferior bone engaging surface, and a first retention feature including a receptacle defined by the tibial component and extending into the first stem, the receptacle including a plurality of first splines extending into the first stem and arranged directly adjacent to one another about an entirety of the receptacle; and

a tibial insert including an inferior tibial component engaging surface, a superior bearing surface, an outer portion joining the inferior tibial component engaging surface and the superior bearing surface, a second stem extending from the inferior tibial component engaging surface, and a second retaining feature including a plurality of second splines directly adjacent to one another and extending along a length of the second stem about an entirety of an outer surface of the second stem;

wherein the plurality of second splines are configured to indexably mate with the plurality of first splines;

wherein the first and the second retaining features cooperate to mate the tibial insert with the tibial component at one of a plurality of fixed rotational orientations relative to the tibial component; and

wherein the plurality of fixed rotational orientations includes multiple orientations where the outer portion remains fully within the perimeter.

2. The tibial prosthesis assembly of claim 1, wherein a opening of the receptacle is defined by the superior surface of the tibial component.

3. The tibial prosthesis assembly of claim 2, wherein the first retention feature extends through a tibial tray of the tibial component.

4. The tibial prosthesis assembly of claim 1, wherein the tibial component defines a passage configured to receive a fastener therethrough to secure the second retaining feature within the first retaining feature.

5. The tibial prosthesis assembly of claim 4, wherein the fastener includes a set screw.